# *Interim Update*
# Red Hill Bulk Fuel Storage Facility
# Final Groundwater Protection Plan
**Pearl Harbor, Hawaii**

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**Prepared for:**
**Department of the Navy, Commander**
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prevent overfilling. Once the bag is full, the pump will be turned off, the vacuum chamber will be opened, and the bag's valve will be closed. If air is escaping from the bag when the lid is open, the process will be repeated; however, the compression hole will only be partially covered to relieve the pressure in the vacuum chamber while the vapors are slowly collecting in the Tedlar® bag. The Tedlar® bag will be detached from the vacuum chamber and attached to the PID. The bag valve will be opened and testing will begin. The PID will be in survey mode.

Once the numbers begin to appear on the PID screen, three readings will be recorded every 10 seconds for 30 seconds in the field log. The average value from the PID will be taken from the three recorded values and the maximum peak. Once the readings have been collected, the PID will be placed back on survey mode. The purge valve will be closed and the next probe can be purged.

During the purging of the probe, the Tedlar® bag from the previous probe will be deflated and the Tedlar® bag valve will be closed before returning it to the Ziploc® bag. The Tygon® tube will be detached and returned to the Ziploc® bag. The appropriate dedicated Tygon® tube and Tedlar® bag for the probe being purged can be prepared for the next monitoring readings. Continue this process until all points at the location have been tested.

Once all the probes of a SVMP have been monitored, all the Tedlar® bags will be deflated and the valves will be closed before returning each Ziploc® bag into the well compartment. All purge valves will be closed and the well cover will be secured. The pump will be unplugged and the monitoring will continue at the next SVMP until all SVMPs have been monitored. The PID will be tested in the main tunnel between each SVMP. The background levels will be recorded in the field logbook (if it reads more than the typical background for the day, change the plastic filter). The standard operating procedure for soil vapor monitoring is located in Appendix C.

### *3.2.2 Soil Vapor Monitoring Equipment*

All non-disposable sampling equipment will be cleaned and inspected for any signs of contamination prior to the start of sampling. All non-disposable equipment will be decontaminated following established procedures between sample locations, and after all samples have been collected.

The sampling equipment necessary to conduct the soil vapor monitoring includes an electric pump, extension cord, 15/16-inch socket and ratchet drive, ppbRAE Plus PID, 10,000 parts per billion (ppb) isobutylene calibration gas, vacuum chamber, dedicated field logbook, field forms, personal protective equipment (PPE), and a flashlight.

## 3.3 Fuel Product Monitoring

Monthly fuel product monitoring will be performed at four monitoring wells (RHMW01, RHMW02, RHMW03, and RHMW05) located within the RHSF. A Solinst 122 oil/water interface probe will be used to detect the presence and measure the thickness of light non-aqueous phase liquid (LNAPL) to the nearest hundredth of a foot at the water surface. Fuel product monitoring will be performed prior to any purging or sampling event. Fuel product measurements will be recorded onto the fuel product monitoring log located in Appendix B. The standard operating procedure for fuel product recovery is located in Appendix C.